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— incrustation, preventing, Von Rolf and Kramer, 406  
Bricks and furnace linings, refractory, S. G. Thomas, 964  
Candles, electric, S. Cohn, 693  
Chains and cables, wireless, W. Deakin, 969  
Chronograph, the, G. L. M., 840  
Coal, the transport of, T. Snowdon, 153  
— apparatus for screening, W. Spedding, 223  
— shipping machinery, G. Smith, 339 [wards, 763  
— and minerals, dressing of, H. Hochstrate, 392; E. Ed-  
— preventing the breakage of, Potter and Hair, 57  
— improvements in cleaning small, Mr. Schmitt (illus-  
trated), 589  
— agglomerating small, G. J. P. Couffinal, 693  
— cores, raising of, C. Jeanson, 737  
Colliery cages, loading and unloading, Mr. Fisher, 9  
Colouring matter, new, 627  
Concrete walls, T. Potter, 48  
Copper pyrites, economic treatment of, H. Doetsch, 225  
— refining of, Wilkes and Johnson, 326  
Edison light, the, 414  
Electric currents, generating, Sellon and Edmunds, 1290  
Electricity and boring machinery, J. G. Cranston, 1113  
Electro-magnetic machine, Gramme and d'Ivernois, 108  
— telegraphs, J. W. Brown, 272 [652; A. Weir, 1025  
— candles, producing, Bennett, 305  
— light, W. S. Wilson, 468; F. Gage, 598; H. W. Tyler,  
— lighting for domestic purposes, J. W. Cadett, 521; Edi-  
son, 674; R. Compton, 970  
Expansion gear for steam-engines, C. de Negri, 441  
Field assaying—the "Little Wonder," J. S. Phillips, 273  
Files, the sharpening of, D. W. Watson, 964  
Fire-damp indicator, A. H. Maurice, 465 [1326  
Fuel, liquid, apparatus for burning, Burbank and Sprague,  
Furnaces, improved regenerative, W. E. Everitt, 205  
— blast, producing, Bennett and Lumsden, 377  
— feeding of, J. Bradlock, 38; H. C. [468  
— for heating iron and steel, Campbell and Summerhill,  
— smelting and other, J. Noad, 482  
— for melting metals, C. Carr, 912  
— puddling and mill, J. H. Bullock, 1170  
Gas carburisation, Kidd and Livesey, 273  
— locomotives, J. R. Purcell, 1254  
Grease regulators for machinery, C. N. Leroy, 161  
Holtway's process of oxidation, 691  
"Hurricane" portable forge, J. Harding, 1303  
Hydraulic engines, expansion, P. Mayer, 272  
Incrustation, removing from steam boilers, H. Esser, 969  
Ingots, manufacture of, C. Simmons, 1283  
Iron and steel, manufacture of, D. Thomas, 32; W. Evans,  
430; W. Drake, 432; S. G. Thomas, 468; S. R. Smyth,  
— and steel, protecting, Clark and Fawcett, 1113 [1135  
— manufacture of, Martin and Cordier, 1171 [1327  
— and steel, manufacture and melting of, W. H. Fryer,  
Lead, softening argilliferous and argilliferous, A. Marin-y-  
Lubricant, a new, H. Cokshott, 652 [Garcia, 1170  
Magnesium, manufacture of, H. Cokshott, 652  
Malleable cast-iron, N. Cordier, 258 [Knight, 719  
Metal plates, pickling and washing, J. P. Jenkins, 272; W.  
— plates, embellishing, Trotter and Co., 712  
— punching and shearing, D. Brickner, 482  
— electro deposition of, G. Zani, 649  
— casting under pressure, W. Taylor, 693  
Metalliferous ores, washing and separating, J. Stenson, 312  
— sulphides, separation of, P. Pauli, 1179  
Mine cages, improved, J. Main, 225  
Mineral, a new, 547  
Mining corves and wagons, J. Taylor, 452, 776  
Moulders' blacking, substitute for, J. W. Ormiston, 205  
Nickel, manufacture of, W. Scott, 549  
Ores, machines for separating, Hastings and Goddard, 482  
— amalgamating chloridised, J. O. Stewart, 1025  
— new process of treating, T. H. Manning, 1170  
Overwinding in mines, preventing, Grabowski, 245  
Peat fuel, carbonised, G. R. Redgrave, 521  
— improvement in the treatment of, Mr. Hall, 686  
Phosphorus, the manufacture of, J. P. Serve, 969  
Picks and drills for blasting, Fisher, Twigger, and Ross, 161  
Pig-iron, refining of, T. S. Blair, 27  
Platinum coating of metals, J. B. Dode, 63  
Pumps, double action, Amos and Smith, 201  
— improvements in, C. Tyson, 1170  
Pulley, improved differential, G. Tangye, 260  
Pyrites residues, treating of, J. Mason, 573  
Radiation of heat, preventing, P. Strelitz, 74  
Railway carriage window fastener, H. Worthington, 181  
Rock drills, Schrader and Fritz, 325; Jordan, Son, and Mehl,  
— drill, W. Dunn, 1197 [589  
— drill, the new hand, J. K. Gulland, 1327  
— drill carriage, a new (illustrated), J. McCulloch, 1141  
Rotary engines and pumps, A. Vacherot, 31  
— engine, a novel, L. B. Lawrence, 441  
Russian plates, imitation, A. Maltby, 1171  
Safety-lamps, Dooley and Minshall, 181; A. Howat, 1017  
Sand from China-clay works, J. F. Pagen, 378  
Shafting, transmitting power by, W. Ritter, 273  
Shearings, working up of iron and steel, J. J. Rogers, 5  
Sheet metal, cutting of, M. W. Johnson, 146  
Slip link for coupling chains, F. Kingston, 326  
Small coal, utilisation of, Taddon and Co., 74  
Split piston ring, improved, R. H. Silcott, 971  
Stampers, direct-acting, Col. Beaumont, 430  
Steam-boiler, improved, S. J. Gold, 32; P. O'Connor, 273  
— engines, regulating the speed of, A. Denis, 55  
— pumps, improved, S. Holman, 378; C. Barrell, 712  
— generator, fuel feeder, &c., smokeless, F. Hurd, 406;  
A. Nobel, 922  
— utilisation of exhaust, N. W. Ericson, 711  
— engines, rotary, Corrott and Foulerton, 712  
— generating with liquid fuel, R. Walker, 1178  
Steel ingots, casting of, W. H. Taylor, 355, 413  
— moulds and cores for casting, G. Cowling, 468  
— and steel-like metals, R. Brown, 1021  
— fluid compressed, J. Whitworth, 1148  
Stone breaking machinery, W. Lester, 33; D. Gray, 489  
— cutting, Messrs. Colne, 669 [Carver, 244  
Stokers and smoke preventers, mechanical (illustrated), H. C.  
Sulphide and other compounds of zinc, C. F. Clans, 326  
Sulphides, utilisation of as fuel, J. Holway, 689  
Sulphuric acid, treating waste, Lavender, Richards, and Wil-  
Sulphate of alumina, A. A. Croft, 378 [Hams, 325  
Tell-tale for steam gauges, E. Marsden, 365  
Telegraph cable, inextinguishable, Berthoud and Borel, 482  
Tin-plate, manufacture of, Dr. F. Belluomini, 32; G. Nure-  
378; D. Davis, 712  
— separating tin from, B. Siegler, 201  
— crystal decoration of, L. Q. Brim, 273  
— cleaning of, T. M. Richards, 476  
Tramways, the working of travelling, J. J. Halcombe, 3  
— the improved, J. Kerr, 1327  
Tubes, welded, C. E. Smith, 1190  
Valves, improvements in, W. Green, 1178  
Water elevator and air compressor, J. Pallen, 272  
— to steam-boilers, supplying of, W. Watson, 1170  
Wheel, a new patent, W. Arnold, 29  
Winding and safety apparatus for mines, M. Nourburg, 413  
Zinc, a ductile, J. Eade, 926



# THE DIVIDEND MINES OF 1879.

COMPILED FROM OFFICIAL SOURCES, AND CONTRIBUTED BY **MR. EDWARD ASHMEAD**, MINING SECRETARY AND ACCOUNTANT, 62, CORNHILL, LONDON.

## PARTICULARS OF THE BRITISH METALLIFEROUS MINES WORKED BY PUBLIC COMPANIES WHICH HAVE PAID DIVIDENDS IN THE YEAR 1879.

Title of Mining Company.	Situation of Mine.	Year Company commenced.	Ore sold in 1879.			Rate of dues.	Existing allotted Capital.			Total amount divided in dividends.	Dividends declared, 1879.		
			Description of ore.	Number of tons.	Amount.		Shares.	Paid.	Total.		Per share.	Total.	
													£ s. d.
Dolcoath, Cost-book .....	Camborne, Cornwall .....	1799	Tin .....	1780	79,148 11 11	1-20th	4,296	10 10 8	45,252 2 10	490,009	1 0 0	4,296 0 0	
			Copper...	4	19 2 4								
			Arsenic...	72	198 4 0								
East Pool, Cost-book .....	Illogan, Cornwall .....	—	Tin .....	760	31,279 0 10	—	6,400	0 9 9	3,120 0 0	113,520	1 19 6	12,640 0 0	
			Tinstone..	—	1,752 11 8								
			Copper ...	2282	4,483 11 0								
Great Laxey, Limited*	Laxey Glen, Isle of Man.....	1863	Arsenic...	—	2,450 0 0	1-8th } 1-20th }	15,000	4 0 0	60,000 0 0	375,000	0 15 0	11,250 0 0	
			Silver-lead	1250	20,400 0 0								
			Blende...	5600	20,662 10 0								
Green Hurth, Lead, Limited .....	near Alston, Northumberland..	1864	Lead ...	344	3,120 2 7	1-10th	6,400	0 6 0	1,920 0 0	14,400	0 3 0	960 0 0	
Lisburne, Limited† .....	near Aberystwith, Cardigan..	1834	Lead ...	924	9,935 12 0	1-14th	400	18 15 0	7,500 0 0	239,800	3 0 0	1,200 0 0	
Mellanear, Copper, Limited.....	Hayle, Cornwall .....	1876	Copper...	6520	20,886 8 5	1-24th	10,000	2 0 0	20,000 0 0	5,000	0 5 0	2,500 0 0	
			Tinstone..	—	17 1 0								
			Lead ...	2584	24,245 6 6								
Minera, Limited.....	near Wrexham, Denbigh ...	1850	Blende...	3067	10,663 10 6	1-11th	9,000	5 0 0	45,000 0 0	606,016	0 8 0	3,600 0 0	
North Hendre, Lead, Limited.....	near Mold, Flint .....	1870	Lead ...	2077	19,627 7 6	1-15th	11,829	2 10 0	29,572 10 0	35,702	0 10 0	7,260 14 0	
							8,146	1 0 0	8,146 0 0		0 4 0		
							18,000	1 0 0	18,000 0 0		0 2 6		
Prince Patrick, Lead, Limited .....	near Holywell, Flint .....	1872	Lead ...	620	6,146 2 6	15s. per ton.	8,000	0 10 0	4,000 0 0	16,450	0 1 9	2,950 0 0	
Roman Gravels, Limited .....	Shropshire .....	1870	Lead ...	2293	22,308 15 0	1-12th	12,000	7 10 0	90,000 0 0	93,900	0 10 0	6,000 0 0	
			Blende...	120	475 5 0								
			Tin .....	777	31,910 10 4								
South Condurrow, Cost-book .....	Camborne, Cornwall .....	1865	Copper...	7	38 0 5	1-24th	6,123	6 5 6	38,421 16 6	38,110	1 15 0	10,715 5 0	
South Wheal Frances, Cost-book ...	Illogan, Cornwall .....	—	Tin .....	728	28,970 5 7	1-30th	4,500	7 12 4	34,275 0 0	42,712	1 17 6	8,437 10 0	
Van, Limited .....	Montgomery .....	1869	Lead ...	4300	45,252 10 0	1-14th	15,000	4 5 0	63,750 0 0	363,000	1 0 0	15,000 0 0	
			Blende...	1750	4,562 10 0								
			Copper...	3044	16,275 18 7								
West Wheal Tolgus, Cost-book .....	Illogan, Cornwall .....	1860	Copper...	3044	16,275 18 7	1-30th	512	95 10 0	48,896 0 0	16,896	1 0 0	512 0 0	
Wheal Eliza, Cost-book.....	near St. Austell, Cornwall ...	1861	Tin .....	614	25,922 16 8	1-21st	1,024	18 0 0	18,432 0 0	28,160	6 10 0	6,656 0 0	
Wheal Peavor, Cost-book .....	Redruth, Cornwall .....	1872	Tin .....	550	21,226 9 8	1-20th	3,000	7 11 0	22,650 0 0	7,275	1 13 6	5,025 0 0	
			Leavings.	—	1,693 0 0								
					£453,641 4 0						£558,935 9 4	£2,485,950	£99,002 9 0

\* The ore returns of Great Laxey are from August, 1878, to August, 1879.

† As a Limited Company since 1864.

The Tin and Copper Mines in the above list paid £50,781 15 0  
The Lead and Blende Mines, ditto ..... 48,220 14 0

Total ..... £99,002 9 0

In 1875, British Dividend Mines 34 in number, paid... £157,480 0  
1876 " " 29 " " 191,469 0  
1877 " " 31 " " 173,771 0  
1878 " " 27 " " 116,441 0  
1879 " " 16 " " 99,002 9

In 1876, Foreign Mining Companies 24 in number, paid £613,236  
1877 " " 19 " " 516,520  
1878 " " 18 " " 587,465  
1879 " " 17 " " 493,568

In 1879 British Mining paid in dividends the lowest amount known within the memory of the present generation, a result in no way attributable to the want of productive mines, of which there are abundance, but to the low prices obtained during the first nine months of the year for ores and metals. No British industry looked so gloomy or so cheerless as that of mining at the opening of 1879, while at the close no enterprise was so buoyant or so hopeful. The turning in the long lane has been reached, and past the turning point, in the new year 1880, is the reward for those whose faith and perseverance have carried them over the bad times of 1879 and the preceding years. The rise in metals came, however, too late to tell on the dividends of 1879; but it is telling already at the opening of 1880. In 1880 we have every reason to expect a large and heavy Dividend List.

Summary of the ores sold, as above:—

	Tons.	Average per ton.	Amount.
Black tin .....	4,449	£42 0 6	£218,457 15 0
Copper ore .....	11,857	3 10 6	41,703 0 9
Lead ore .....	13,142	9 18 9	130,635 16 1
Silver-lead ore .....	1,250	16 7 0	20,400 0 0
Blende ore .....	10,537	3 10 6	36,363 15 6
Sundries .....	—	—	6,110 16 8
Total .....			£453,671 4 0

Average prices compared with former years:—

	Black tin.	Copper ore.	Lead ore.	Blende ore.
1875 ...	£51 10 0	£5 15 0	£16 10 0	£3 5 0
1876 ...	44 10 0	5 6 0	16 2 6	3 13 6
1877 ...	41 15 0	4 7 0	13 1 3	3 15 0
1878 ...	35 12 6	4 7 0	10 13 0	3 9 9
*1879 ...	42 0 6	3 10 6	9 18 9	3 9 0

\* Sales sold end of year, after rise, brought up the average for tin.

## PARTICULARS OF THE FOREIGN AND COLONIAL MINES WORKED BY BRITISH PUBLIC COMPANIES WHICH HAVE PAID DIVIDENDS IN THE YEAR 1879.

Title of Mining Company.	Situation of property.	Year registered.	For what worked.	Existing allotted Capital.			Total amount divided in dividends.	Reserve and sinking funds.	Dividends declared in 1879.	
				Shares.	Paid.	Total.			Per share.	Total.
				£ s. d.	£	£	£	£ s. d.	£ s. d.	
Australian Mining .....	County Sturt, South Australia ...	1845	Various .....	18,315	7 7 6	134,605½	21,520	—	0 2 0	1,831 10 0
Cape Copper Mining, Limited .....	Cape of Good Hope .....	1863	Copper .....	20,000	10 0 0	140,000	700,625	20,000	2 7 6	47,500 0 0
Fortuna Company, Limited .....	near Linares, Spain .....	1854	Lead .....	25,000	2 0 0	50,000	184,270	4,190	0 3 3	4,062 10 0
Frontino and Bolivia Gold, Limited .....	United States of Columbia .....	1864	Gold .....	55,000	2 0 0	110,000	9,625	—	0 1 0	2,750 0 0
Libiola Copper, Limited .....	Sestri Leranti, near Genoa .....	1867	Copper .....	3,600	10 0 0	36,000	70,200	—	2 0 0	7,200 0 0
Linares Lead, Limited .....	near Linares, Spain .....	1852	Lead .....	15,000	3 0 0	45,000	252,850	2,522	0 4 6	3,375 0 0
Port Phillip and Colonial Gold, Limited..	Clunes, Victoria, Australia .....	1852	Gold .....	97,500	1 0 0	97,500	170,625	—	0 2 0	9,750 0 0
Richmond Consolidated, Limited .....	Eureka, Nevada, U.S. ....	1871	Gold, Silver, and Lead ..	54,000	5 0 0	270,000	417,017	5,583	1 5 0	67,500 0 0
Santa Barbara Gold, Limited .....	Minas Geraes, Brazil .....	1868	Gold .....	40,000	0 10 0	20,000	17,500	1,500	0 3 0	6,000 0 0
Scottish Australian, Limited .....	New South Wales .....	1859	Various .....	120,000	1 0 0	120,000	—	10,000	0 3 0	24,000 0 0
Sierra Buttes Gold, Limited .....	Sierra County, California .....	1870	Gold .....	80,000	0 10 0	40,000	—	—	0 1 6	—
Ditto (Plumas Eureka), Limited.....	Plumas County, California .....	1872	Gold .....	122,500	2 0 0	245,000	213,870	5,000	0 3 0	18,375 0 0
St. John del Rey, Limited .....	Minas Geraes, Brazil .....	*1830	Gold .....	140,625	2 0 0	281,250	175,781	—	0 6 0	42,187 10 0
Tharsis Sulphur and Copper, Limited ...	Tharsis, Andalusia, Spain .....	1866	Various .....	Stock	All	253,000	1,383,525	67,623	25 per cent.	63,250 0 0
				91,896	10 0 0	918,960	1,891,182	120,124	1 13 0	187,548 0 0
				31,100	7 0 0	217,700	—	—	1 3 1-5	—
Vancouver Coal, Limited .....	Nanaimo, Vancouver Island .....	1862	Coal.....	13,000	6 0 0	78,000	—	3,796	0 1 6	1,032 10 0
				400	10 0 0	4,000	—	—	0 2 6	—
Victoria (London), Limited.....	Victoria, Australia .....	1860	Gold .....	25,000	1 0 0	25,000	22,623	—	0 0 7½	1,406 5 0
				25,000	0 16 0	20,000	—	—	0 0 6	—
West Prussian, Limited.....	Rhenish Prussia .....	1875	Silver, Lead, and Blende	14,000†	—	—	—	—	0 2 0	—
				5,500‡	10 0 0	210,000	31,763	7,000	0 16 0	5,800 0 0
				1,500§	—	—	—	—	—	—
				£ 3,316,025½		£5,562,976				£493,568 5 0